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MEDICINE AND SURGERY.

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THE AMERICAN PRACTITIONER.

NOVEMBER, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

THE DUTIES AND THE RESPONSIBILITIES OF THE PHYSICIAN.*

BY THEODORE S. BELL, M. D.,

Professor of the Principles and Practice of Medicine, University of Louisville.

GENTLEMEN OF THE MEDICAL CLASS: These exercises, introductory to a long season of arduous labors, are devoted chiefly to you, but we are happy in having a large portion of the public to hear the lessons addressed to you. They are deeply interested in all that is to minister to lives of usefulness in the profession which you are endeavoring to enter. At the threshold of this undertaking it is proper for you to understand that this medical department does not invite you to repose on a bed of roses. Nothing short of most devoted labor can prepare you for the duties of the physician. Since the days of the great worthies in the medical profession, who won renown with such helps as were in existence then—such worthies as Sydenham, Mead, Haller, Werlhof, Torti, Boerhaave, and Pinel—immense fields of science in medicine have been discovered and thoroughly worked; fields that urgently

*An Introductory Address, delivered in Public Library Hall October 5, 1874.

and daily demand an intimate acquaintance with them on the part of every physician, but which were utterly unknown to even the giants of former ages. Helmholtz quotes from the chorus of the Antigone of Sophocles the mighty questions, "Who can survey the whole field of knowledge? Who can grasp the clews and then thread the labyrinth?" If those were momentous questions to the grasping and mighty intellect of Athens four hundred and forty years before the birth of Christ, what are they now in our profession alone, nearly nineteen hundred years after that enlightening birth occurred—a birth that gave new springs to nearly every throb of the human intellect? At the beginning of the past century Boerhaave held, in the renowned University of Leyden, the chairs of botany, chemistry, pharmacy, and clinical medicine; but now, toward the close of the nineteenth century, there is not any one man on the earth that could acceptably teach all those departments of science. Because of the want of "clews" among the contemporaries of Harvey, by which "the labyrinth" of the circulation of the blood could be "threaded," Harvey was supposed to have discovered that grand element of physiology, the manner of the circulation; but when the sharp eye of the Italian Malpighi, with the lenses of the microscope, surveyed this circulation, he not only dissipated the guesses of Harvey, but presented a new and a valuable world to the thoughts of medical men. These are but glimpses of this interesting theme; but, meager as they are, they must awaken thought—earnest thought respecting the labors necessary to enable you to seize "the clews and thread the labyrinths;" for threaded they must be, or you will be disastrous failures.

Let us take a brief survey of an all-important department of medical knowledge that owes its birth to very recent times. I refer to the laws of physical geography, from which have already sprung sanitary science in its broadest scope, climatic therapeutics, and preventive medicine. The science of physical

geography was almost created by Alexander Humboldt. In the Middle Ages the sanitary wisdom of the best governments was directed to two objects, the segregation of lepers and the partial establishment of free baths for the poor; the latter, as Renouard's History of Medicine says, "often spreading the diseases they were intended to prevent." The civilized world has awakened to the vital fact that it is the business of governments to understand and enforce sanitary truths; and the doctor who is ignorant of these requirements must be looked upon, as he is, a cripple in his profession. This medical school early selected as its motto, as its recognition of its duty, the lofty sentiment, "*Sanos Sospitare Ægrosque Sanare*," thus proclaiming as its great mission not only the cure but the prevention of disease. No truth is better established than this: that in every community there is too large an amount of sickness that should be prevented, too many deaths that should not occur. Look at the expressive announcements of history. The Pandects of Justinian, quoted by Dr. Jarvis in one of the ablest and most exhaustive papers on "The Political Economy of Health" that have ever appeared, show that "in Rome, from two hundred to five hundred years after the Christian era began, the average duration of life in the most favored class was thirty years." In the present century, Dr. Jarvis says, "the average longevity of persons of the same class is fifty years."

"The records of life and death in Geneva, Switzerland, for the last three hundred years are more complete than any others now known. These show that the expectation of life from birth, or the average longevity, was 21.21 years in the sixteenth century, 25.67 years in the seventeenth, 33.62 years in the eighteenth, 39.69 years from 1801 to 1833, 40.68 years from 1814 to 1833. In the sixteenth century 25.92 per cent of the children died in their first year; in the nineteenth century the deaths of this age are reduced to 15.12 per cent. In the sixteenth century 61.11 per cent perished before they reached maturity at twenty; in the nineteenth century this mortality is reduced to 33 per cent. In the sixteenth century 3.08

per cent passed their threescore-and-ten; in the nineteenth century 17.94 per cent reach that length of life."

Mallet's Annals of Hygiene show, according to Dr. Jarvis, that as large a proportion now live to be seventy years of age as lived to be forty-three in the sixteenth century.

These gains in vital forces, which are gains in the well-being of communities through improvements in methods of living that were inaugurated by medical men, are but a portion of the blessings secured by properly-directed medical labors.

There are many correlative forces of this character that deserve and would well reward attention; but they are too vast to be treated hastily, and on this occasion time would be too brief to attempt any thing approaching fullness in elaborating them. At a single element of interest in connection with this part of the theme I must take at least a glance, because its meaning is not properly recognized, and it is of profound interest to every individual member of society. This element of correlative forces is found in the truth, cautiously deduced by the best English authorities from abundant and well-established data, that for every death there are constantly sick at least two persons. This gives 730 days' sickness and disability for every death. Dr. Jarvis shows that even in Massachusetts in 1870, renowned as that commonwealth deservedly is for its sanitary solicitude and vigilance, "there was a loss in the effective period equal to 276,461 years by premature death, and 24,553 years by sickness, making 301,014 years' loss of force or productive power in a single year. There was the same proportionate loss in the previous year, and there is no reason to hope that it will not be the same in ratio of the numbers of the living for years to come, unless some happy change shall come over the sanitary habits and conditions of the people of Massachusetts." If these are the demonstrated results among a people as well protected by nature and by sanitary regulations as those of Massachusetts,

what must be the appalling figures in the vital statistics of communities that have not a tithe of the natural and legislative protection that guards Massachusetts? These are questions that affect the vital forces not only of every community, but of every family and of every individual. These are momentous matters that force themselves upon every medical man. He can not evade them even if he desires to do so; and there is surely not a human being that supposes, no matter how fervid and fruitful his imagination may be as to the potency of pills, powders, and lotions, that they could even seriously invade that domain of figures in the devastated vital statistics of Massachusetts. Yet the demand is imperative that these figures shall be materially changed toward the welfare of the community. Science is widening its domain, and with this widening the people at large are greatly increasing in useful knowledge. They feel that they have a right—and they are fully justified in the judgment—to demand of medical men the possession of an accurate philosophy, of thoroughly-ascertained truth, for the arrest of these frightful devastations in the political economy of health—devastations that roll their waves of evil to the door of every member of society. Latham, in his "Sanitary Engineering," expressly says, "Health is the capital of the laboring man." Is it not the working, the essential capital of every human being? The time is rapidly coming when each medical man will be weighed by the community in sanitary scales, and all "who kick the beam" by reason of lightness will have indelibly scarred on their foreheads, if there is room for it, the handwriting that horrified the vision of the Chaldean king: "Mene, mene, tekel, U-Pharsin." The intelligence of the people will dispose of all light-weights in these essential features of medical science. All who are weighed in these sanitary scales and found wanting will receive from the people a diploma on which is written in very legible characters, "The kingdom you sought by impoverished means is given to others."

This planet was assigned to man as his heritage. The estate has long been in a troublous state of litigation, but a court of equity will finally give it to the holder of heritable rights when they are settled. The vast ocean of atmosphere which floats above and around us is filled with issues of life or death, according to our mode of using them. The seas which roll their mighty forces around our domain of land are an integral part of our possession, but to enjoy them we must understand them. There is not an element of the land that does not forcibly appeal to our profoundest study for a perfect comprehension of its relations to the life and well-being of man. In the "fathomless abyss of stars" our planet seems to be almost a mere nothing. The sun himself, mighty in magnitude as he seems to us, powerful as he is over the pathways of the earth, is almost lost in the eighteen millions of stars that Herschel found in the misty nebula called the milky way, or galactic circle. But insignificant as the earth seems to be, it is a part of the Cosmos; and as far as explorations have taught us any thing in relation to the infinite number of other members of the Cosmos, our planet, small as it is, is the most cherished one in the universe; it is the only one known to us that knows its Creator, its origin, its destiny. The more thoroughly we study its variety of forms, its climates, its laws, its adaptation to specified purposes, the more we admire all its multiform purposes; and in surveying it through the heights and depths of physical geography, thus learning what can be made of it for the benefit of mankind, and exploring through the historic periods of the human race, we unhesitatingly accept the philosophy of Tennyson in his noble utterance:

> "Yet I doubt not through the ages one increasing purpose runs,
> And the thoughts of men are widened through the process of the suns."

The "increasing purpose" running "through the ages" is the restoration of man to his primitive heritage of the earth, and to all things that are therein contained. Among the

great means toward this end must be the conquest over all avoidable sickness, all premature decay and death; because this of itself marks other large fields of conquest.

I have shown you what great gains have been in recent times made upon past centuries. These are a hopeful, a cheering earnest of what is yet to be won; but we must consider "nothing won while aught remains to win." In the light of observation and experience, in the blaze of positive and manifold gains, our pathway is unobstructed; the goal stands plainly before us in the beckoning beams of a golden sun. I know of nothing in human enterprises so well calculated to stir all the soul within us as a desire to participate in these exalting and ennobling objects—of doing the greatest good to the greatest number, and making this good a fixture in the progress of humanity. Nothing whatever is either exalting or ennobling that does not improve and increase the welfare of mankind. When we move among the certainties and achievements that medical philosophy has gained in its comparatively recent career we may feel that we are turning our backs upon "the time- and sin-defaced, fallen Adam," and advancing toward the primeval possessor of Eden, who, as old Bishop South says, moved in a light that "gave the soul a bright and full view into all things, and was not only a window, but a prospect." . . "Like a better Archimedes, the issue of all his inquiries was an *eureka*—an *eureka* the offspring of his brain without the sweat of his brow. Study was not then a duty; night-watchings were needless; the light of reason wanted not the assistance of a candle." He adds, "Aristotle was but the rubbish of an Adam, and Athens but the rudiments of Paradise." We tread in this notable direction only when we fill our minds with a knowledge of all the capacities of earth for the habitation of man. Learn what is evil and shun it, and pursue only that which is good. This is being "of the earth earthy" for a purpose that exalts.

Within the past fifty years we have learned more of this planet, and of all the planetary forces that influence it, than was acquired in all the cycles of time that preceded the past fifty years. We not only bring worlds, that are so distant from our planet that it takes centuries for a ray of light from them to reach us, within the range of telescopic vision, but we analyze the atmospheres of these distant worlds, and know their composition as thoroughly as we know that of the one which we breathe. Jacob's ladder, resting upon the earth at Haran and reaching the heavens, did not enable him to climb; but the spectroscope, with its adjuncts, enables us to climb into infinite space, and journey through vast areas of countless worlds. M. Wurtz, president of the French Association for the Advancement of Science, at the recent meeting of that body of savans, beautifully announced in his address, "Marvelous conquests of physics, which reveal at once to us that abundance of forces which environ the sun, and the simplicity of the constitution of the universe!" But while physicists are thus usefully walking among these far-distant worlds, what are we doing for the earth? Are we not plodding along in our geographical studies in ruts older than the false guides of Mercator's projection? Is not a large mass of that which we call geography, as taught in the schools, as useless rubbish as geomancy itself, and quite as void of any good? When we look at the impoverished material, if material it is, thus doled into the dulled ears of pupils, can we feel astonishment at the deplorable ignorance that prevails too extensively with respect to these subjects—subjects too that are vital forces? In these fields of knowledge there are ears that hear not, dormant faculties that perceive not, and instead of eyes

> "that should have shot
> O'er flow'ry vales to distant sunny hills,
> And drawn, with joy, the vast horizon in,"

they are eyes that are "dead in their piercing rays."

Under the scholarly gifts, the mechanical industries, and

the rare skill of the superintendent of the State School for the Blind, that institution has maps made for teaching the physical features of countries, by which blind children readily learn the character of the ground surface, and accurately trace the isothermal lines. This is an educational necessity not yet provided for in schools for seeing children. Is it not strange, or is it shameful, that apparatus essential for the acquirement of any geographical knowledge worth having should have first been developed in the Kentucky School for the Blind?

It will be an auspicious day for empires and states—for the whole human family—when it shall be a prerequisite for the practice of medicine that the candidate for that responsibility shall be able to show that he has mastered Keith Johnson's Atlas of Physical Geography; Elisée Reclus's two great works, one on the earth, the other on the ocean; and Flammarion's volume on the atmosphere. The knowledge of isothermal lines and of their meaning is of itself a knowledge of an immense volume of climatology; and every human being, every plant on earth, from the palms of the tropics to the club-mosses of the arctic circle, are simple expressions of climatic forces. Reclus says, with perfect truth, "If man wishes to become master of the forces of nature, and to make them work to his advantage, the first condition is that he shall understand them." Where are these masters to be found?

I have been much gratified in seeing an awakened attention in many high quarters to these vast considerations. At the recent meeting of the British Association President Wilson, of the Royal Engineers, in his survey of geographical progress, speaks most depreciatingly but becomingly of appliances for teaching geography in the minor schools of Great Britain. "What is absolutely needed," he says, "are models or relief-maps, wall-maps, and globes. The use of models as a means of conveying geographical instruction has been too much neglected in our schools. If any one considers the difficulty a pupil has in understanding the drawing of a steam-engine,

and the ease with which he grasps the meaning of the working model, and how from studying the model and comparing it with the drawing he gradually learns to comprehend the latter, he will see that a model of ground may be used in the same way to teach the reading of a map of the same area." . . . "In our wall-maps we have been too much inclined to pay attention to the boundaries of countries, and to neglect the general features of the ground." Yet, to the medical man at least, "the general features of the ground" and their relations to bodies of water of differing temperatures, or mountain-ranges, and the direction of these ranges, are every thing; the boundaries are comparatively nothing. That vast subject, climatology, which should be the alpha and omega of every physician, is perfectly dependent on a minute acquaintance with "the general features of the ground" and conterminous bodies. Thus, for example, intermittent fever is not prevalent above the forty-fourth parallel of north latitude on the Atlantic coast of North America, but on the western coast of Europe this form of fever is annually severe as high as the sixty-second parallel of north latitude. The latitude of Fort Sullivan, Maine, is eleven degrees farther south than that of Edinburgh, Scotland, yet the annual mean temperature of Edinburgh is five and a half degrees higher than that of Fort Sullivan. The isothermal line on the western coast of Europe that marks the northern boundary-line of intermittent fever, at the sixty-second degree of latitude, sinks to about the forty-first degree on the eastern coast of Asia. What can any physician know of any climatic influence in disease who does not understand the meaning of the facts in physical geography which I have just given? These are comparatively the merest a b c of this great subject; yet how many are there, do you suppose, who could give even an inkling of the meaning of these truths? There is scarcely a day in the career of a practicing physician when in the treatment of disease he may not draw practical wisdom from a correct knowledge

of climatal influences. Men may occasionally seem to "get along" in the profession without knowing much on this subject; but then I have seen an occasional case that appeared to "get along," as it is called, without knowing any thing on any subject. These are exceptions; the rule is quite different. Before much stress can be laid on such events it is important to know how the victims "got along." We do not often hear of this through the sonorous tones of a trumpet.

In the great movements that are astir among all the prominent centers of civilization for protecting the health of communities there looms up among the heights of sanitary science and philosophy a beneficent power that is actively sending its healing rays among the dwellers of the earth. I refer to climatic therapeutics. We have already accumulated a large mass of facts, in regions of diseases hitherto unsuspected of such relationship, which conclusively demonstrate that there are climatal conditions which produce these diseases, for the cure of which, while the climatal conditions remain, the powers of our materia medica are futile. Low sea-levels, the borders of sluggish streams, narrow valleys inclosed between mountain-ranges, have long been known as creators of diseases belonging to their climatal conditions; but observation has taught us that there are other forms of disease produced by climatic influences that were formerly unsuspected of such origin. These conditions may in varying degrees extend over a large range of country; but be very careful to remember that they may be restricted to a single dwelling; a single house may have climatal conditions foreign to the climate of the neighborhood. They may be very visible or palpable; they may have to be bored for as you do for water in making an artesian well. Hundreds of conditions must be studied; each circumstance must be carefully, circumspectly surveyed and considered; each fact, each phase of fact, must be kept in its proper place; each clew must be appropriated to its own labyrinth if we are to thread our way successfully

in the paths of this knowledge. In preparing to administer aconite or conia you have to be on your guard lest you bring on disaster. The paths to which I am directing your attention require equal vigilance and accurate knowledge and circumspection. In the medical profession nothing whatever should be done on any other terms than these.

What are the facts about those climatal conditions of diseases to which I have just called your attention? We know beyond the shadow of a doubt that there are in sea-air potencies of cure for some of the diseases of the heart far beyond any of the powers of our materia medica. Our distinguished countryman, Dr. H. I. Bowditch, has been conspicuous in demonstrating by facts piled upon facts that there is an essential connection between consumption, damp dwellings, and neglect of hygienic powers; thus leading that fell disease into the domain of preventive medicine. I doubt whether any thing has been more perfectly demonstrated than this. Hence the subsoil plow, with proper drainage, is more effective over the prevention of the disease than all the oil, valuable as it is, that has been drained from the livers of the codfish is for its cure. An able medical writer in one of the English quarterlies, who does not seem to have heard of the masterly labors of Dr. Bowditch, says, "In Salisbury, Ely, Rugby, Banbury, and other towns, the introduction of a system of sewerage was so managed as to dry the subsoil to a considerable extent. The deaths from consumption in those towns were reduced by from one third to one half their former number. In Leicester the same truth is enforced, and with it we may do as we did in our school-boy days with our arithmetical sums—prove the result by a species of going backward. In Leicester, during the progress of the sewerage works, the subsoil water was greatly reduced. The death-rate from consumption fell forty per cent. When the works were completed the subsoil water rose. The death-rate of phthisis rose with it, although it still remains far below the former rate."

In regions elevated considerably above the sea-level consumption, according to the observations of Mühry, the sanitary chief of Saxony, and of other observers quoted by him, diminishes to almost a nullity. "In the Bristol sanitary engineering deaths from typhoid fever have been diminished thirty-three per cent, in Salisbury no less than seventy-five per cent." Rhode Island, Maine, Vermont, New York, and Massachusetts abundantly confirm these statistics on consumption and soil-moisture. In the mediæval ages a medical poet, in surveying the contortions and surgings of what were called medical doctrines, despairingly asked, "Driven thus from system to system, shall we never be able to throw out an anchor?" In full view of the lustrous experiences around us, from a thorough investigation of all the pathological and physiological problems involved in the subject, I feel that we stand on firm ground in declaring that in climatic therapeutics and hygienic measures we may not only throw out our anchor, but with full assurance of faith find, in nautical phrase, "holding-ground" for the anchor. In the primeval doom sickness was not even alluded to as a part of the omnipotent sentence; hence we wrong ourselves in deeming its presence among us as unconquerable, as invincible to our properly-directed exertions. Myriads of people pass long lives without sickness, but no one escapes the pronounced decrees, "Dying thou shalt die," and "In the sweat of thy face shalt thou eat thy bread." The prophetic seers of the Hebrews, in depicting the glories of the Messianic reign, reveled in portraying great changes in the physical condition of the ground surface. The "mountains and hills were to be made low, the valleys were to be exalted, the crooked paths made straight, and the rough places were to be made plain." These are intimations that we may beneficially change the ground surface, provided we know how and when to do so. These changes are already around us; the glistening "sunlit dews" betoken the approach of dawn; "the eyelids of the

morning" are opening from the sleep of ages; the sunbeams of a brightening day leap from peak to peak of the mountains, and roll down their floods of living light along the slopes, cheering the swelling vale, and lighting up sea-levels and river-basins with recuperated energies, giving noble promise of a new earth wherein dwells health.

I am well persuaded that I speak "the words of truth and soberness" in the utterance of a creed destined to become universal. It is, "When all men and women live in properly-placed and constructed houses, and at all times attend carefully to the hygienic laws of mind and body in themselves and offspring, then will consumption, like many kindred evils, be wholly eradicated, or made comparatively harmless in its influence on the human race." This is the creed uttered by that great master of the subject, Dr. H. I. Bowditch, and it is consonant with all the enlightened experiences that speak from observation of facts. All data that can be relied upon conclusively show that the administration of medicine can not extirpate consumption from the regions of the earth where it prevails, causing more than one fourth of the deaths in the United States. A large, an extensive, an abounding series of observations and statistics demonstrate that it may be torn up by the roots and utterly destroyed by proper hygiene, public and private, as certainly as a good farmer extirpates weeds from his land. Upward of a century ago the Grand Duke of Tuscany utterly extirpated from the Maremme di Lucca pestilential visitations that had been annual for centuries. From July to November every year the inhabitants of the fertile and populous Maremme were compelled to absent themselves from their homes. Yet this was once a part of the great empire of the Etruscan civilization. In the hands of the Etruscans it was one of the healthiest places in Europe. It has become again one of the chief health-spots of southern Europe. Gondolpho, northwest of Lake Turnus, was for centuries devastated every year with pestilence. In 1611 Pope Paul V.

removed the cause of this annual visitation, and from that time to the present Gondolpho has been conspicuous for its healthiness. And what is there in mortal achievement and excellence that can be compared to that engaged successfully in removing from a community, by the annihilation of the causes of sickness, the fears, the sufferings, the woes, and losses through sickness? What emotions fill the heart as we see these evils pass away "as," in the language of Bulwer, "the vapor that rolls from the face of a lake to which the sunlight restores the smile of a brightened heaven."

In certain elevated regions that markedly affect the barometer cancer, that deadly enemy of mankind which baffles all investigated therapeutics, is almost entirely unknown. Its haunts are in river-valleys or their equivalents. The writer of whom I have spoken says, "Damp air, associated with alluvial soil and heavy barometric pressure, appears to be a predisposing cause." Within these consecrated sciences—consecrated to the highest earthly interests of man; physical geography in all its details, sanitary experiences, climatic therapeutics, and the indubitable results of preventive medicine—rest the hopes of a beneficent future for empires, states, cities, and individuals. Their teachings are as applicable to families and to individuals as to large collections of people.

The accumulated facts on these subjects, all speaking one language, gathered from numerous regions of the earth by hundreds of observers, are signs of promise that justify the highest hopes. These are far more likely to grow than to diminish. These are fields laden with fruits that show how nations may be healed. They demand of you all the culture you can command. Less than that will lead to failure. In the walks of the healing science you can no more afford to neglect them than in mastering the mysteries of arithmetic you can make progress without a knowledge of the powers of numerals. The highest department of medical philosophy is that which prevents disease. The harvest is abundant, but

the laborers are few. You may think they are crowding one another. Daniel Webster was once consulted by a young friend respecting the choice of a profession. Mr. Webster suggested the law; but the young man objected, asking if that was not already crowded. "By no means," said Mr. Webster; "the lower rooms are jammed, but the upper rooms are almost completely empty." Let me urge you to fasten your aims on these upper apartments rather than on the ground-floors and cellar-doors of the temple.

Ever bear vividly in your minds that you are to be priests at one of the most sacred altars known to humanity; hierophants of the grandest knowledge intrusted to mortals. The enlarging domain of the sciences is shaping the destiny of the medical profession for a higher, holier, nobler sphere of duty than it has known in the past of its history. This profession has a brighter, loftier Pisgah than that from which Moses surveyed the promised land, but which he was prohibited from entering. From your Pisgah you may survey these vast, extended plains. You may see a land in which by "crystal streams trees grow, whose fruit is for the healing of the nations." These fruits are sanitary science, climatic therapeutics, and preventive medicine as important parts of physical geography, and into all these you may freely enter.

But while I thus point you to the highest exaltation I would not have you to be negligent of the past of our profession. That wonderful master of English art, one of the most original in his conceptions, one of the most successful of all that have lived, Owen Jones, says, "To attempt to build up theories of art, or to form a style independently of the past, would be an act of supreme folly. It would be at once to reject the experiences and accumulated knowledge of thousands of years. We should regard as our inheritance all the successful labors of the past; not blindly following them, but employing them simply as guides to find the true path." This is the useful lesson I wish to impress upon you

at your entrance upon the curriculum of this school. The expanding forces of knowledge have burned "the wood, the hay, and the stubble," but in the embers are gold and silver, all the more precious because of the crucible through which they have passed. Think not that Albertus Magnus, Morgagni, Lancisi, Avicenna, Torti, Pinel, Sydenham, and Mead passed useless lives because they did not know even the alphabet of the vast readings that stand conspicuous and inviting before you, and which are positively essential to you as foundations for usefulness and honor. For the themes which I have only adumbrated before you, you will be the better equipped by mastering, not what the giants of old conjectured, but all that they knew. You have not their valid excuse for failure in the great utilities of their profession; you have facilities of which they knew nothing, of which they could know nothing, for lading yourselves with fruits in value far beyond all that grow in the gardens of the Hesperides.

Do not take up the very erroneous impression that because I am urging upon you these great armaments for a successful career against disease I am indifferent, or wish you to be indifferent, to the powers of our materia medica. No one can have better reasons for faith in the therapeutics of our profession than I have; but I wish you to put on the whole armor that belongs to the medical profession. I now proceed to introduce you to an element of study in which the powers of the materia medica play a conspicuous part.

The important means for improving your opportunities to which I now propose to direct your thoughts are the utilities of Clinical teaching. If not a better, I am an older soldier than you are, and, as an old campaigner, I may glean from the camp-fires of experience and observation something that may be useful to young recruits. The means to which I now refer are clinical instruction. Of proper clinical teaching you should make all the use you can; with that which is worthless you can not have too little to do. In one of the most

notable letters ever written, sent by one of the greatest intellects that have existed to an assembly of two races of people, this very singular and striking truth was uttered: "All are not Israel who are of Israel." In parity of language we may say, All is not clinical teaching that is of clinics. Hermann Boerhaave, of Leyden University, was the most renowned teacher of medicine in his day. I have already quoted from Helmholtz an enumeration of the multifarious professorships that Boerhaave attempted to fill. Among these was one devoted to clinical teaching. He was indeed to a great extent the founder of clinical teaching in Europe. We can measure with perfect accuracy through Boerhaave's aphorisms, even when read through the glosses of Van Swieten's Commentaries, the character of this clinical teaching. He was in the habit, as one of the adornments of his clinical teaching, of measuring the chances of the recovery of patients by the amounts of saliva poured from the salivary glands under what he regarded as the benign influence of mercury. Patients who poured forth a pint per hour were considered by Boerhaave in a more hopeful state of convalescence than those who exhibited the pitiful result of only eight ounces per hour. This, it is true, is only one brick from the edifice, but it is a good one. It would be easy to multiply examples similar to this specimen. I have no doubt that Boerhaave could have delivered as practical and as intelligent a lecture upon the roots and dialects of the Aryan language, a knowledge of which was not in existence then, as upon any clinical case. Upon all such teaching, much of it reaching far down into this century, Bichat wrote an obituary notice, which will be a recognized and standing epitaph upon all such medical follies. "What," he says, "is the value of observations from those who do not know even the seat of the disease?" By this light you may know them. An excellent criterion is found in the fact that the clinical teacher shall have a large experience as a practitioner, and shall be able to portray with

the mastery of an artist the diseased conditions of the clinic before him. A man may be an excellent practitioner and be a very indifferent clinical teacher, but he can not be a clinical teacher of any excellence unless he is a good practitioner. There were many physicians in Paris who were the equals, as physicians, of Trousseau, but he has never had any rival as a clinical teacher. He was one of the most thorough masters of the literature of his profession that France has produced, by which he was enabled to spread over his clinici all the medical treasures of all ages, including his own. In this invaluable department of his offices as a clinical teacher he stands without a peer. This leads me to urge upon you the uses of didactic teaching and the study of the great lights in the profession, in order that you may fully understand every element of the clinical teaching you receive. Experience has joined them as bone of one bone, as flesh of one flesh; let no man attempt to put them asunder.

This department of the university founded clinical teaching in 1837, in Louisville, and conferred renown upon it. Prof. Caldwell was the clinical professor, but he had the good judgment to select Dr. Lewis Rogers as his assistant, and the assistant was the clinical teacher. It would have been difficult to find in the city his equal for the work. That which Dr. Rogers thus started on a successful career has grown to great magnitude, while the founder of this important success, we are happy to know, remains among us in the prime of life and usefulness. Prof. J. B. Flint delivered the lectures on clinical surgery. In 1839 Prof. Daniel Drake was elected professor of clinical medicine. For three years the students walked through the wards in the hospital and heard the lectures at the sides of the patients' beds. In 1840 the faculty, disapproving of this method of teaching, erected a building for clinical teaching at the hospital. In a few years, on account of the growth of the school, this original building was found to be too small, and in 1849 the building was surrendered to

the city council on condition that the city would construct a more commodious building, and during the summer of 1849 this was done. This building was used until the increasing wants of hospital service required that the hospital should be greatly enlarged, the additions to the hospital creating a necessity for a new structure for clinical teaching. This new structure is the one now devoted to this purpose. In addition to these means the university established a dispensary, which furnishes a large amount of clinical material during the entire year, and the college clinics are a fruitful resource for preparing students of medicine for becoming practitioners. The university has spared neither labor nor expense in promoting the success of clinical teaching.

But I call your attention to clinical instruction, not simply because it gives you topographical views of diseased actions and aids in furnishing you means of recognizing the various phases presented by pathology, but to introduce you to a delicate perception of professional character that you should never forget. In every approach that you make to the precincts of suffering, no matter where it may be, you must bear in mind that your feet are in pathways ever sacred to the twin graces of mercy and gentleness. They should clothe all your professional thoughts and movements as a well-fitted garment. The entrance into the room devoted to clinical teaching should be recognized as the introduction to that deportment that should always be characteristic of the healer of sufferings and woes. I can not do as well in any other way in impressing these refined but very necessary lessons upon you as in repeating to you the teachings on these points of one of the greatest exemplars of professional duty the physicians of this city ever had among them. In a noble lecture on clinical surgery, in 1856, in the amphitheater of the City Hospital, Prof. J. B. Flint said:

"The apartment in which we are assembled is called a 'theater,' and our exercises, not unfrequently, 'theater clinics.' But assuredly

no dramatic entertainments are to be expected here under my administration; no *display* of professional or unprofessional wit or rhetoric or skill intended to 'bring down the benches' in vulgar applause; especially no ministering to that prurient appetite for operations which has sometimes converted the hospital theater into a scene of bloodshed scarcely less revolting to humanity than the gladiatorial spectacles of its pagan prototype. If your ideal of a surgical professor represents him as an enterprising vivisector, with his sleeves rolled up, declaiming of his varied exploits with the knife he brandishes in his bloody hand, alas for its realization in the person before you!" . . . "On the contrary, gentlemen"—and this is that part of Dr. F.'s teaching I want to impress on you ineradicably—"may I not expect you to co-operate with me in rendering our future interviews here as faithful representatives as possible of that quiet, unostentatious, beneficent event—the physician's visit; differing chiefly in the immaterial particular that, instead of going to our patients, they are brought hither to us. If these unfortunate objects of our care and study retire from our presence, after one or many consultations, comforted, encouraged, relieved, or in the way of relief, whether our administrations in their behalf have been simple or elaborate, gentle or severe, a good clinical lesson will have been given, and I shall have acquitted myself alike to them and to you."

May I join in these admonitions on conduct, these lessons to the doctor as a doctor? In a sense infinitely truer in its application to any clinic in your charge than, to say the best, about the dubious teaching of Lord Brougham respecting the relations of the lawyer to his client, whether that clinic be in a miserable hovel, in the ward of a hospital devoted to the vilest, or in the palatial mansions of the wealthy, the great, or the powerful, that patient must be your world, the cynosure around which you are to gather all the consolations, comforts, and blessings that a high professional equipment and an elevated humaneness can command. Whatever distinctions society may make concerning castes may be a species of law to society. You can not lawfully recognize them in your duties to your sick charges. Kings or queens and pariahs are on an equality in your professional ministra-

tions. Around your profession cluster the highest interests of the human race, the holiest affections, the most lofty relations. As your manhood may be noble and complete, the chances are that your professional aims and movements may spring from this good soil into the best and grandest professional fruitions. You can never gain any thing by sinking your manhood in pursuing your profession. A Frenchman who committed the common blunder of making his manhood subservient to his occupation discovered his great error only on his death-bed, and he ordered this appropriate epitaph to be engraved on his marble-slab: "Born a man, died a grocer." There was not any thing in his occupation, nor is there in any other honest one, to stifle the activities of the largest humaneness. It will be no credit to you to have emblazoned on your monumental marble, "Born a man, died a doctor." Rather let it be, "Although diligently engaged in the great duties of a doctor, he never forgot that he was a man;" that all that concerned man concerned him, and demanded the exercise of whatever can ameliorate or exalt the condition of man; in all things like Cowper's physician,

> "whose humanity sheds rays
> That make superior skill his second praise."

REPORT OF THREE CASES OF HEPATIC ABSCESS, WITH REMARKS.*

BY L. S. M'MURTRY, M. D.

Since the means of transportation have arrived at such a degree of perfection in this country that persons are transferred from remote parts with remarkable rapidity, the physician may at any time meet with diseases which are contracted

* Read before the Boyle County Medical Society, September 7, 1874.

in other and distant portions of the republic. During the past year, spent in the semi-tropical region of Louisiana, I had under my care several cases of hepatic abscess, a disease which, though of more common occurrence in warm climates, is not entirely unknown in this region.

CASE I.—D. D., aged forty-five years, white, laborer, admitted to Charity Hospital, New Orleans, November 11, 1873; had an attack of dysentery in August, continuing for several weeks, and which had left him in feeble health; had suffered from malarial fever frequently during the three years previous. No dysenteric symptoms had occurred for a month prior to admission to the hospital, at which date he was slightly jaundiced; appetite poor; complained of pain in right shoulder and hypochondrium, increased by deep inspiration; tenderness in this region on slight pressure. A physical examination of the chest gave a negative result. The line of hepatic dullness was extended upward, and percussion there gave sharp pain. The pulse was normal in character, being 76 per minute; temperature 99° F. The urine was very highly colored, but otherwise normal. Suppurative inflammation of the liver was suspected at the first examination, and the diagnosis was pronounced a few days afterward. The treatment instituted at this time and continued throughout consisted of tonics and concentrated food.

During the following ten days these symptoms remained, with the addition of hectic symptoms, occurring usually in the afternoon. Quinine then became an element in the treatment. During the tenth night after admission the abscess opened into the right lung, and when we made our visit in the morning the patient had expectorated a large tin basinful of pus mixed with bloody material. The microscope showed that broken-down liver-tissue was contained in this matter. This expectoration continued, though in less quantity than at first, for six weeks, when the patient succumbed to the heavy drain upon his system. No autopsy could be obtained.

Case II.—H. E., aged twenty-four years, was admitted to the same ward, in October last, with dysentery. This patient had been a very robust young man, but had suffered from malarial fever for some weeks, when dysentery came on, and he was admitted to the hospital in a very feeble condition. The dysentery gave him much suffering, and was not amenable to treatment in the hospital. Some days elapsed before attention was attracted to the liver, when it was discovered to be enlarged, the line of dullness being extended above and below. The pulse was rather rapid, and hectic symptoms were present. The temperature was continually elevated one or two degrees above the normal standard. The treatment was expectant and supporting.

On December 12th our patient died, and an autopsy was made twelve hours after death. On opening the abdomen the liver was discovered to be very much enlarged, and in removing it from the abdomen the abscess broke and flooded the whole table. The liver had been converted into an immense cyst. The bowels exhibited the characteristic lesions of chronic dysentery.

Case III.—W. J., aged twenty-six years, a night hack-driver, was admitted to Ward 20, Charity Hospital, January 20th. He stated that he had been sick for a week past, previous to which time he had been in good health for years. He complained of pain in the right side and shoulder, loss of appetite, and digestive disturbances. The pulse was 82, and normal in character; temperature 99.2° F. On physical examination the upper line of hepatic dullness was found to be extended about an inch, and a less extension below. Manipulation in this region produced pain. The diagnosis was pronounced as *acute hepatitis*, and the following prescription ordered:

℞. Inf. Pruni Virginianæ, . . . fl. ℥ iv;
Acid nitro-hydrochloric dil., . fl. ℥ j.
M. S. A table-spoonful every four hours.

Concentrated liquid food was ordered, and an anodyne administered at night.

There was very little change in the symptoms during the two weeks after admission, and the treatment was continued. About this time the abscess opened into the right lung, and the patient began to expectorate pus, though not in such large quantity as the patient referred to above (Case I). The expectoration continued for several days and gradually diminished, the liver being reduced in size. The patient was discharged on February 6th, and more than a month afterward I saw him driving his hack at night, when he informed me that he had been well since his discharge from the hospital.

These cases of suppurative inflammation of the liver contain some features of interest as to the pathology of the affection, and especially as to its etiology. In Cases I and II an attack of dysentery preceded the symptoms of hepatic abscess.

Dr. Budd is of opinion that dysentery stands in a causative relation to abscess of the liver; that either by suppurative phlebitis or by absorption of septic material from the bowel the radicles of the portal vein conduct the destructive material to the liver.* In Case III dysentery did not precede the abscess. As causes of hepatic abscess we would place at the head of the list intemperance and indolence, combined with heat and malaria. However, Cases I and II show that if dysentery is not the cause of hepatic abscess, it is a very unfortunate complication; and, notwithstanding the opposition, we think Dr. Budd's view of the pathology of this affection worthy of very careful consideration.

That the passage through which the discharge is made is a prominent element in prognosis is suggested by these cases. If the abscess opens into the pericardium, pleura, or peritoneum, a fatal result very soon follows, as has been shown by the reports of the English medical officers of the Indian

*On Diseases of the Liver. By George Budd, M. D.

service on this subject. If the abscess opens through the wall of the abdomen, or an outlet is furnished by the trocar, air enters the cavity of the abscess, and the result is usually fatal. The most favorable outlet is through the lung, and our Cases I and III would indicate that this is the most favorable when there is the least amount of broken-down liver-tissue discharged. In Case I there was great destruction of hepatic tissue, as indicated by the sputa; in Case III the discharge consisted of laudable pus almost entirely, and this is the only case which recovered.

The diagnosis is always difficult, and in most cases is only made when the abscess is discharging its contents in some direction. The liver is not a sensitive organ of itself, and it is only when the inflammation has extended to the peritoneal covering that pain becomes a prominent symptom. In Case II the autopsy revealed almost total destruction of the liver, and pain was never a prominent symptom. The diagnosis was not positive, and abscess was suspected from the hectic symptoms and enlargement of the liver, and this associated with dysentery. Jaundice is not sufficiently constant to be relied upon as a symptom of diagnostic value, only being present to a slight degree in one of our cases. Pain in the right shoulder is a valuable diagnostic symptom, and was present in Cases I and III.

When there is a strong suspicion that pus has formed in the liver, Dieulafoy's aspirator may be used both as a diagnostic aid and as a curative measure. This appears to be the most favorable of all methods of ridding the gland of pus, while at the same time the sac of the abscess may be injected with medicated fluids without the entrance of air.

The fact that the diagnosis is difficult, and can not with certainty be made during the formative stage of the affection, has a bearing upon its treatment. After suppuration has occurred it is of course useless to administer mercury with the view of preventing further effusion of lymph or favoring

its absorption, while the known power of this drug to impoverish the blood may still further incapacitate the system for repairing the damage already done. The following extract from the experienced pen of Dr. McLean, contained in Reynolds's System of Medicine, may not be without interest in this connection:

"The invalids from every foreign station garrisoned by the British army pass through the Royal Victoria Hospital, Netley. Nothing is more common than to see men who have made excellent recoveries after the evacuation of hepatic abscesses through lung or bowel: nothing more rare than to see men with the cicatrix of such an abscess in the right hypochondrium, more particularly in an intercostal space. Where there is an external cicatrix it is almost invariably situated just below the ensiform cartilage, verifying the dictum of Morehead as to the greater frequency of recoveries when abscesses pointing outwardly occur in the thin part of the right or well toward the left lobe."

DANVILLE, KY.

A CASE OF WOUND OF THE KNEE-JOINT, WITH ESCAPE OF SYNOVIA.*

BY R. G. JENNINGS, M. D.

N. J. H., carpenter, aged twenty-six years, rather delicate, with strumous diathesis, cut himself in the right knee with an adz. The wound was an inch and a half in length, extending from the inner border of the patella, across the tissues of the knee, over the joint. The physician who saw the case first dressed the cut by two interrupted sutures and adhesive strips, and gave it as his opinion that the wound was too slight to prevent the patient from resuming work at once. Acting upon this suggestion, the patient in two hours expe-

* Read before the College of Physicians and Surgeons of Little Rock, Ark.

rienced intense pain, which continued without intermission for forty-eight hours, when I was called. At this time there was extensive inflammation of all the tissues of the knee-joint; the surface intensely red, swollen, and painful, with an ichorous discharge from the wound; could neither move the leg nor bear even the weight of the bedclothes. The general excitement was extreme, with high fever, thirst, etc. After removing the dressings and cleansing the parts I applied carbolic-acid cerate to the wound, and directed a lotion of muriate of ammonia, tincture of arnica, and opium to be kept constantly to the knee, and the patient to have a brisk purgative and a full dose of opium.

The next morning found the patient easier, having slept some, and in all respects better. The following day, there being an increase of the local suffering, I applied warm flaxseed and hop fomentations to the knee, and gave a febrifuge mixture. At my next visit I discovered that a considerable quantity of synovia had escaped from the wound, and this continued for a number of days, the fluid varying in color and consistency, and also in amount. The edges of the wound presently began to granulate, and gradually cicatrized, except at one small point, which continued to discharge small quantities of synovia. The swelling about the knee now increased, and was accompanied by considerable œdema of the leg and foot. Subsequently a large abscess formed in the popliteal space. This was freely opened, and after discharging pus mixed with synovia for some time was at the end of six weeks finally closed by the aid of methodical pressure. The treatment during this time had been first antiphlogistic, then supportive, and finally tonic and stimulant.

After the abscess and original opening into the knee had closed, and the more acute local symptoms had subsided, the joint was daily painted with tincture of iodine. Gentle frictions were made over the entire limb, and passive motion perseveringly instituted, with the effect of soon restoring the

parts to their normal condition, save perhaps a slight enlargement immediately about the knee, with an occasional sensation of grating when the joint is moved and some want of power in the limb.

LITTLE ROCK, ARK.

THE MEDICAL STUDY OF INEBRIETY.

BY T. D. CROTHERS, M. D.

The report of the select committee of the British House of Commons on the care and management of habitual drunkards contains the most valuable literature on inebriety yet published. Over thirty different physicians, including superintendents of insane asylums and specialists of the highest authority, in both this country and Europe, were examined. The evidence in this report shows that seventy-nine per cent of the criminals passing through the jails are so from drunkenness; that in England twenty per cent of insane patients, and in the United States fourteen per cent, arise from the same cause; also about one half the idiots are the offspring, directly or indirectly, of intemperate parents. Statistics of the cause of crime among the prisoners of the Albany, N. Y., penitentiary show that twenty-one thousand out of twenty-four thousand committed were inebriates.

These facts are significant of the necessity of a thorough study of this subject. There are ten asylums, both public and private, in this country and Canada devoted to the cure of inebriates. The number treated is probably not less than two thousand per year, with a percentage of recoveries varying from thirty-three to forty-eight per cent, based always on the condition of the patient two years after treatment, and sometimes much longer. This recovery is ascertained to be as

complete and permanent as in any other form of mental or physical disease. The time required varies from twelve to sixteen weeks; in English institutions longer. It is asserted that three per cent of inebriates recover naturally, and that societies and benevolent institutions restore or help to recovery about seven per cent.

Compared with the study of insanity—which for eighty years has occupied the attention of specialists, aided with all the light and appliances of modern science, resulting in the cure of from thirty to forty per cent of chronic cases, and from seventy to eighty per cent of the acute cases—the treatment of inebriety promises to be strikingly successful. Its recent study, and the chronic condition of the patients upon which this study is based, together with the want of authority to restrain patients, amply confirm its abundant promises for the future.

That inebriety is a disease is established, but may be reaffirmed in the following summary: 1. Inebriety may begin as a vice or habit, but it soon merges into a physical disorder, involving the digestive apparatus and blood, and through these the nervous system and will-power, pursuing a certain definite course, and ending fatally. 2. Inebriety may be developed suddenly from certain obscure lesions of the brain or arise from the direct line of inheritance, and in all cases is attended with the same general physical symptoms and disorders. 3. It presents the same general pathological and physiological characteristics, irrespective of country, race, or condition, alcohol and its compounds being both the general and particular cause.

The discussion of inebriety for over half a century, founded on the error that it was a vice which could be checked by will-power alone, has been barren of results comparatively; and the poor inebriate is still the victim and object of persecution not unlike the insane before the advent of Pinel. The medical study of this subject has been limited to the last

fifteen years. Although it was affirmed sixty years ago that inebriety was a disease requiring treatment in hospital, nothing was done except casually in a few lunatic asylums. In 1857 the first and yet the largest asylum for inebriates was opened at Binghamton, N. Y., and from that time this subject has received special attention.

The study of inebriety suggests several divisions and classes of the disease. *Dypsomania* is applied to intermittent drinkers, and signifies a mania for drink, coming on in defiance of reason, conscience, public opinion, or any ordinary restraint. *Methomania*, or a persistent desire to drink at all times and places. *Alcoholism* is a general term representing any abnormal condition induced by alcohol in any form.

Dr. Joseph Parrish makes the following classification: 1. Confirmed inebriates: those hopelessly given over to drink without any prospect of making a favorable change. Often this intemperance seems to be a mere incident in connection with a life of general depravity. 2. Emotional inebriates: those who have no bad intentions or acute convictions of duty, responsibility, or established principles of right; who are moved by the promptings of impulse simply. 3. Accidental inebriates: men of good principles and character, who know and acknowledge their infirmity, and endeavor to overcome it.

Dr. James Crichton Brown, superintendent of the asylum at Wakefield, Eng., makes the following suggestive analysis of inebriety before the parliamentary committee:*

"Out of six or seven hundred cases of insanity, due directly to inebriety, under my observation, I have recognized four forms of mental disease especially connected with drunkenness.

"1. *Mania a potu*, or alcoholic mania. This is distinct from delirium tremens; the latter being over, as a rule, in eight days at the outside, and this form of excitement lasting for six weeks or two months. It is a genuine attack of mania, which is always

*Committee on the Cure and Management of Drunkards. Blue Book, 1872.

characterized by the same sort of illusions as are present in delirium tremens; namely, morbid beliefs of a suspicious character, alarm, and ideas of persecution, with restlessness and agitation. It is as it were a prolongation of delirium tremens. I find this variety of insanity is due to repeated attacks of delirium tremens, and is often followed by a good deal of depression and mental stupidity, indicating failure of brain-power subsequent to the excitement.

"2. I have recognized as due to drunkenness a monomania of suspicion; a form of chronic mental derangement in which, without any excitement or muscular trembling, as in other cases, we have delusions of suspicion. The sufferer may talk rationally upon general subjects, but at the same time he has a furtive manner, and believes that he is persecuted, and that electricity plays upon him to the detriment of his health. These delusions of suspicion may be latent, but at times may become so urgent as to goad their victim to attempt either suicide or homicide.

"3. *Alcoholic dementia*, characterized by failure of memory and of the power of judgment, with symptoms of partial paralysis, ending fatally.

"4. *Dypsomania*, an irresistible craving for alcoholic stimulants, occurring periodically, paroxysmally, and with a constant liability to periodical exacerbations when the cravings become altogether uncontrollable. This is always associated with certain impairment of the intellect, and of the affections and moral power, and sometimes with delusions."

Dr. Brown also made a distinction between the disease which drives a man to drinking and the drinking which produces it; the one he called a vice, the other a disease. The indulgence of the propensity in one was voluntary, and in the other not.

Dr. Christison defines an inebriate to be, *first*, not an ordinary or habitual drunkard, but one who ceases to be controlled by every moral and religious consideration; *second*, frequently overwhelming the mind in intoxication; *third*, so far gone as to occasion danger to his family or affairs. Dr. Forbes Winslow defines inebriety under two heads, normal and abnormal drunkenness; one he terms a vice, the other a disease.

In the diagnosis of inebriety a peculiar alcoholic diathesis has been described by various writers. Dr. B. N. Comings says:*

"The alcoholic diathesis is as well marked and as readily recognized by the observing physiologist as the tubercular. The sensual animal organization of the child of drinking parents as clearly foreshadows its liabilities as the rosy tint of the cheeks, the long eyelashes, the slender neck, and narrow chest indicate tubercular tendency. This alcoholic diathesis is early shown by indecision of character, weak will-power, nervous irritability, tendency to convulsions or epilepsy from slight causes. The appetite, which is often morbid, capricious, or extravagant, is stronger than the reasoning powers or judgment. With such children self-indulgence is the ruling passion which molds and controls character. It requires no prophetic vision to foresee that children thus organized will become easy victims to intemperance if they are brought within its seductive influences."

Other writers have mentioned an alcoholic diathesis noticed in the precocious talent, irregularity of temper, and also neurosal disorders, such as neuralgia, hysteria, hypochondria, and eccentricity; and in those families where inherited physical disorders are present, such as clubfoot, hernia, strabismus, cancer, or consumption. These peculiarities are inherited either directly or indirectly, and comprise so many additional hints of the magnitude and complexity of this disease.

We shall discuss the causes of inebriety under the following heads: Primary, Hereditary, Predisposing or Exciting.

The primary causes are all those influences which when combined form a taste for alcohol or develop the vice of drinking, ending in disease. Of these we may enumerate love of excitement, social habits, vicious company, medicinal use of alcohol, etc. Each one of these, or all of them combined, frequently develops violent cases of inebriety. Hereditary causes are the most frequent. For over half a century these influences have been recognized by medical men, yet

*See Report on Claims of Inebriates to Public Sympathy, before the State Medical Society of Connecticut, 1873.

never studied until lately. A writer in the British Physiological Journal observes, "The most startling problem connected with inebriety is that it not only affects the health, morals, and intelligence of the offspring, but they inherit a fatal tendency and craving for the same liquors which acted as a poison on their parents at the commencement of their being." The laws of inheritance are yet obscure. In some families we find a predisposition to specific physical disorders breaking out in various forms and peculiarities, in others a peculiar exemption from disease; in one case the system seems freighted with the germs of decay and weakness, in the other the tendency is toward recovery under all conditions of exposure. Not unfrequently these disorganizing tendencies overleap one generation or more, and appear in the third or fourth generation, showing that these defective cell-functions may remain dormant, awaiting an exciting cause to kindle them into activity. Dr. Howe, of Massachusetts, reports that out of three hundred idiots one hundred and forty-five were from drunken parents. These facts are confirmed by statistics from inebriate asylums. The inebriate transmits not only a debilitated physical and moral stamina, but a defective cell-function, which, like the seeds of syphilis or tuberculosis, reproduce its disorders with almost fatal exactness. Inebriety frequently ends in insanity, and insanity may cause inebriety. From insane parents we may have chronic inebriety, and *vice versa*. What this relation or kinship is we can not tell at present; we simply know the fact; but the children of inebriates derive from the parent a physical and often a mental taint, which, if we understood it, would perhaps throw additional light on many strange phases of this disease.

How far inherited inebriety is connected with insanity, either as a cause or result, is yet a fruitful subject of discussion. Dr. Dodge, formerly superintendent of the New York State Inebriate Asylum, writes, "Inebriety and insanity are twin-brothers in all their manifestations and results." Dr.

Nugent, government inspector of lunatics of Ireland, believes there is a very close relation between them, and that the decrease of the population of Ireland of two millions during twenty-five years, with no decrease in the amount of insanity, is owing to the greater indulgence in drink; also that if there is a disposition to insanity, drink is sure to develop it. Dr. Mitchel, commissioner for lunacy for Scotland, says that from an experience of thirty years among the better classes of English society, a large percentage of mental and brain disturbances arises from inebriety. Dr. Joseph Parrish thinks that insanity and inebriety are two very different diseases. Inebriates have not diseased intellects literally, but merely impotence of will-power, which develops into hallucinations, delirium, or mental irregularities, passing off in a few days or weeks, leaving the intellect clear and competent. Insanity is a deranged intellect and perverted judgment, which does not pass off readily; also in some men there is a predisposition to insanity, and in others to intoxication, from the same causes; just as men exposed to wet or cold and fatigue may either get a rheumatism or a pleurisy. Dr. Anstie* believes that paroxysmal drinking always results from hereditary insanity. Dr. Druit† says, "Many people drink priodically. Instead of having a fit of gout or insanity they have a morbid sensation, which leads them to a bout of drinking. Of the many exciting causes of inebriety we may mention wasting disease, severe nervous shock, sun-stroke, injury of the head, excessive grief, or reverse of fortune as among the most prominent." Dr. Parrish‡ says, "There may be changes in the cerebral structure from accident or sudden shock, producing functional perversions, from which the same desire for alcohols may originate." Dr. Brown testified before the committee of Parliament, "I have known dypsomania to be produced by injuries of the brain in perfectly sober men;

* Before the Parliamentary Committee, 1872. † From same report.

‡ See paper read before the Baltimore Medical Society, 1874.

also I have seen it produced by sun-stroke and other causes. I saw a case of a sober man who became a dypsomaniac by taking a draught of cold water in a hot day, which caused fainting and an entire change of character." Other witnesses mentioned its origin in the commotion which the system undergoes at puberty or climacteric change. During the late war a number of cases were noticed from these causes, also following low forms of typhoid or malarious fever, and injudicious prescriptions containing alcohol. There are good reasons for believing that inebriety originates in many cases from the poisonous compounds of alcohol now in such almost universal use.

In considering the pathology of inebriety it is a pleasure to note that American authorities are far in advance of their transatlantic brethren on this subject. Dr. Joseph Parrish, in a recent lecture,* says, "I believe the diseased condition which leads to intemperance to be one of alimentation chiefly. Our appetites differ widely. In some forms of disease there is eccentric diversity, as in hysteria and chlorosis. Here the articles eaten do not satisfy gustatory sense, but a constitutional demand. Such cases show a disordered alimentation and of the nerve functions which control it. . . This is attributed to some unusual molecular change or metamorphosis in nerve-structure or some variation in the process of digestion."

Dr. Willard Parker says,† "Our appetites simply express the wants of the system; but when abnormal or diseased cravings for alcohol, opium, or hasheesh exist it indicates a diseased nutritive function demanding relief beyond the power of the will."

Dr. George Burr concludes a valuable paper‡ on this subject as follows: "1. Inebriety is a disease of constitutional

* Before the Baltimore Medical and Chirurgical Society.

† See article in vol. iii of American Association for Drunkards.

‡ See paper in vol. iii of American Association for Cure of Inebriates.

character, involving the entire organism in its consequences; 2. That the true disease is a morbid craving for alcohol, of which the act of drinking is but the effect; 3. Whatever the true physiological action of alimentation may be, or in whichever system of nerves the sensation which gives rise to hunger and thirst may reside, the symptoms of inebriety indicate that the disease is a disordered condition of this function, and that the ordinary sensations of appetite for food and drink are perverted and uncontrollable." In an article read before the Albany County Medical Society the author refers to this subject as follows: "There are some reasons for believing that the brain is divided into certain districts, which preside over and take cognizance of organic life. The processes of nutrition are so intricate and varied it is not unreasonable to suppose that certain brain districts preside over and co-ordinate its functions, determining the quantity and quality of food needed. When this function becomes deranged unnatural, inordinate manifestations follow, more food than is required is taken, the quantity and quality ignored, perversions and aversions begin, and molecular changes follow beyond the power of analysis to determine. To summarize: 1. Inebriety is a disease of certain parts of the brain and of the nutritive functions under its control; 2. It is provoked by alcohol in variable quantities, depending upon unknown conditions of the body at the time of exposure; 3. A weakened will-power and low tone of physical vigor, with tendency to inebriety not inherited, are manifestations of the disturbance of the co-ordinating power of this function."

Dr. Parrish remarks,* "There are morbific causes, which lie concealed in the human constitution, which tend to the development of various forms of disease. I think it safe to assume that in the germinal cell this element resides, which is certain to progress with the evolution of its forces and structure, as the cell itself is certain to develop into a human

* See lecture before Baltimore Medical and Chirurgical Society, April, 1874.

being; and that when the being is completed it will possess all the characteristics which resided primarily in the cell, including its physiological as well as its pathological tendencies; and also that each molecule, as it is dissipated in the process of disintegration and growth, leaves its impression upon its successor; and be that impression physiological or the reverse, it has the power of continuity until such continuity is interrupted and modified by the nutritive forces. Another fact equally important must be borne in mind, namely, that the life of a cell may terminate and give place to a successor of a new character, and thus the condition of the individual constitution assumes a new plane of life."

Of the treatment of inebriety Dr. Comings says,* "The only successful treatment of this disease consists in the employment of such physical and moral means as shall enable the inebriate to persist in total abstinence, and so long as he can maintain this position he is said to be cured."

Physically the inebriate has deranged nutritive functions, and from that a general debility of all the organs, with perverted will-power and weakened mental force. The function of repair by which the body is built up and sustained is interfered with. To reach complex disease all efforts must be directed to building up the physical, and through that reach the moral and mental. Restore the inebriate to good health, then you can bring a strong mental co-operation in aid to complete the treatment.

The treatment may further be classified under two forms; reparative and restorative. The former removes all exciting causes and influences which increase the disease, thus lessening its intensity, and enabling the patient to partially recover and resume business again. A change of climate, surroundings, and association, with temporary medical help, will frequently do this; the present treatment of inebriety aims to accomplish this result generally.

* Refer to "Claims of Inebriates," page 14.

The periodic drinkers are the least hopeful. They are subject to paroxysms not unlike malarious poisoning, and during the frenzy seem bound by no restraint. After the attack they make frequent and desperate efforts to save themselves, but fall as before. For this class the asylum offers the only possibility for recovery or stay of the disease, by building up the system and restraining the outburst until the victims are over the attack. It is asserted that there are over one hundred thousand of this class in this country, who are growing worse every day. Under proper medical treatment at an asylum many of them would be enabled to regain their place in society and business.

By the restorative treatment the patient recovers his health, and is cured in the same sense that a man with pleurisy or pneumonia becomes well again. He may be attacked again by wanton exposure to the causes. To accomplish either of these plans there must be special surroundings and conveniences such as can be found in but few private families.

The general treatment may be summed up as follows: 1. Hospitals and asylums, built for the special purpose of treating inebriates, remove the exciting cause—viz., alcohol—and this is of the first importance. 2. They enable the patient to isolate himself from all excitement, and allow complete rest of the nervous system. 3. They remove all care and responsibility from the patient's mind, except that of recovering his lost health, and make him a party with the physician to bring about this result. This of itself is a powerful factor in the treatment. 4. Hospitals and asylums give the medical man complete control over the habits and surroundings of the patient, and offer facilities for superior hygienic and medical treatment.

Dr. Forbes Winslow testified before the parliamentary committee "that institutions for the treatment of inebriety were the crying wants of the age;" and no one who has given attention to the subject can be found to deny that the

present public treatment of the inebriate is a sad reflection on the intelligence of the age. The cruelty to the insane of a century ago is repeated in the poor outcast drunkard of to-day. A large part of the business of our city courts is to administer fines and punishment to this unfortunate class. The appeals of reformers directed exclusively to the mental and moral nature of the inebriate, and wholly omitting even mention of physical and medical treatment, evince an ignorance of the subject which is simply amazing.

The proportion of cures effected in inebriate asylums, as compared to those obtained in the best regulated insane asylums, is most striking; and, in view of the difficulties and prejudices which they have encountered, must be regarded as in the highest degree encouraging. And it is confidently asserted that an active and intelligent co-operation of medical men, both in the study and practical management of inebriety in institutions adapted to its treatment, promises to effect more for the relief of the evil than all other agencies combined.

These observations may be briefly recapitulated as follows: 1. Inebriety is both a physical and mental disease; 2. It is excited or caused by alcohol, either directly or indirectly; 3. Pathologically it is confined to certain brain districts, disturbing their functions, resulting in organic and functional lesions of the body, particularly of the nervous system; 4. The experience of only fifteen years has shown that from thirty to forty per cent of all cases are curable; 5. With these facts and results the medical study of inebriety promises to be one of the most practically useful fields of science that can enlist our attention.

ALBANY, N. Y.

Reviews.

Latent Gonorrhea in the Female. By EMIL NOEGGERATH, M. D., New York.

Dr. Noeggerath, who occupies a prominent position among American gynecologists, has recently published a work with the above title, in which he endeavors to prove that the wife of every husband who at any time in his life previous to marriage may have had a gonorrhea will, with very few exceptions, suffer from this disease in a latent form, and which sooner or later will manifest its existence by disease of the uterus and its appendages. To prove this assertion the author cites fifty cases which, in addition to catarrh of certain portions of the sexual mucous membranes, showed symptoms of either acute perimetritis, recurrent perimetritis, chronic perimetritis, or ovaritis. These diseases exert a most unfavorable influence upon their victims; for among eighty-one women only thirty-one became pregnant, and but twenty-three of these reached the ninth month, while three miscarried and five aborted. These eighty-one females had altogether but thirty-nine children; forty-nine were entirely sterile; and as eleven women did not conceive again in from three to eighteen years after the first pregnancy, sixty were practically sterile. The causes of this marked infecundity is explained by the author by the speedy death of the spermatozoa in consequence of the abnormal secretions of the genital mucous membranes.

Dr. Noeggerath deduces the following conclusions after close study of the cases under his observation:

1. Gonorrhea in the male, as well as the female, always leaves traces behind it, even after apparent cure.

2. There is a latent gonorrhea in the male as well as the female.

3. Latent gonorrhea in the male, as well as the female, may give rise to either acute or latent symptoms in any one previously free from taint.

4. Latent gonorrhea in the female manifests itself in course of time by acute, chronic, or recurrent perimetritis, or ovaritis, and in the form of catarrhal inflammation.

5. Wives of men who at any previous time may have been thus affected are, as a general rule, sterile.

6. Those who became pregnant aborted or gave birth to only one child.

7. Fungi are generated in the secretions of latent gonorrhea which are similar to those found in the discharges of acute gonorrhea in the male subject.

It is manifest to our minds that all of the above conclusions can not be correct; some of them are indisputable. The author insists on a course of treatment which, to say the least, will be found very difficult to enforce.

It would perhaps not be proper to close this notice without adding that the views of Dr. Noeggerath have met with most decided opposition from European authorities, who have not hesitated to express their unqualified disapproval of his doctrines. It would, we think, be well if such of our readers as are interested in the subject would give the little book of Dr. N. a careful perusal, as it must be allowed that many of the author's arguments are at the same time novel and original.

R. S. B.

Clinic of the Month.

OLEATE OF MERCURY IN THE TREATMENT OF RINGWORM.—Dr. Kane considers (London Lancet) the oleate of mercury as having the following advantages over other remedies in the treatment of ringworm: 1. It is a *certain remedy*, if carefully applied. 2. It *produces no staining* or injury of the skin. This is of great importance where the disease appears in the face. 3. It is *painless* in its application, which is not true of the strong parasiticides. 4. It *readily penetrates* the sebaceous glands, hair-follicles, and even into hairs themselves. Thus it is more likely to destroy the fungus than spirituous or aqueous solutions of mercury. In very sensitive skins the irritation sometimes produced by it may be avoided by reducing the strength of the solution and applying it with a camel's-hair brush. The ordinary strength of the oleate is ten per cent.

UNCONSCIOUS SCRATCHING.—Dr. Tilbury Fox says *(ibid.)* on this subject: "I am convinced that sufficient attention is not paid to the evil effects of scratching upon skin-diseases which are accompanied by pruritus, and especially by such as may be termed unconscious scratching; *i. e.*, that which is practiced during the night. To the case of old people suffering from pruriginous affections these remarks particularly apply. I was recently consulted by a gentleman in his fifty-eighth year, who had been greatly distressed and worried by an attack of cutaneous pruritus, for which he had failed to get relief, and which he aggravated greatly by savagely excoriating the skin with the nails, thereby inducing a crop of what is known as pruriginous papules (inflamed follicles

and papillæ in a state of excoriation). The cause of his malady was overwork and want of fresh air, no doubt. This, however, is not the point I want to notice, but the effect of scratching during sleep practiced perfectly unconsciously upon himself. He told me that his mornings were miserable on account of the burning and soreness he felt in his skin. He imagined that he had exacerbations of his disease in the mornings; but I observed that each morning the skin appeared to be more than usually excoriated, and on requesting his wife to watch his doings at night it appeared that he was in the habit of almost continuously scratching himself in various parts of the body when in sound sleep. He had no idea that he habitually so scratched his skin, but attributed the ill effects of the scratching to an aggravation, natural as it were, of the disease. The disease in his case was speedily cured, though it had lasted some time, by anointing the body with simple oil, and tying the hands in gloves, so that the nails could inflict no injury upon the skin when he was not watched in the night. The case illustrates the importance of attending to 'little matters' in the treatment of skin-diseases, and especially in regard to scratching."

Atropia in Phthisical Sweating.—Dr. Hassall, of the Hospital for Consumption, Ventnor, who has noted the effect of atropia in sixteen cases of phthisis, sums up his experience (*ibid.*) as follows:

"The sulphate of atropia is best prescribed in pill, with extract of gentian. Watery solutions are not to be depended upon, for they soon spoil by keeping. The first dose should in no instance be larger than one eightieth of a grain, and guided by the results the dose may, if necessary, be increased to one sixtieth or even to one fiftieth of a grain; but if this latter quantity be exceeded, well-marked symptoms of poisoning will almost certainly ensue. In each of the sixteen cases in which the remedy was tried the first dose produced a dis-

tinct effect on the perspiration, either wholly arresting it or materially diminishing it. In only one fourth of the cases, however, was this effect direct and permanent; that is to say, only four patients, after using the pills for a varying number of nights, were able to omit the remedy without the sweating returning. But in these four the effect was lasting, for when seen two months after the cessation each patient reported that he was still free from the slightest dampness. Of the remaining twelve cases four found the benefit direct but temporary; that is to say, they obtained complete relief on those nights on which they took the atropia, but the perspirations returned if the pill was missed. In seven cases, although the eightieth of a grain at first diminished the sweatings, the dose had to be increased to maintain the effect. At last, however, the increasing habituation to the drug which characterized the sweats did not apply to the toxic symptoms, for these became so marked that the remedy had to be abandoned in all seven cases without its having succeeded in putting a stop to the sweats in a single instance. Only one case remains, and here there appears to have been an unusual sensibility to the action of the drug. The eightieth of a grain distinctly lessened the profuse sweating each time it was tried, but after three or four attempts it had to be discontinued on account of the severe symptoms of poisoning to which it gave rise. It will thus be seen that the remedy controlled the perspiration more or less in the whole of the sixteen cases; that the effect was direct but permanent in four, direct but temporary in four, beneficial and transitory in seven, and that it was inadmissible only in one instance. These results will be all the more striking when it is added that in many of the cases the sweatings had extended over a period of several weeks, and had resisted all the ordinary methods of treatment.

"The toxic symptoms most frequently complained of were intense heat and dryness of the throat during the night, and indisposition for bodily or mental effort on the following

morning. Vomiting sometimes occurred, but diarrhea was not observed. In one case there was retention of urine for several hours. The pupil was sluggish in action, but distinct dilatation was not common except in those cases where one fiftieth of a grain was administered. The patients often complained of dizziness and inability to read any print but that of large type. It is well known that all efforts to check the night-sweats of phthisis too frequently fail; and although it is not urged that the sulphate of atropia is less uncertain than other remedies, it is believed that it will not be found inferior to them in obstinate cases, in some of which it was of much service after all other remedies had failed. The drug would probably prove of extreme value in combating the perspiration in those diseases (such as acute rheumatism) in which the sweating extends over a comparatively short period, and is not so inveterate as that in phthisis."

Hypodermic Mercury in the Treatment of Syphilis.—The following is the formula used by Mr. Cullingworth:

℞. Hydrarg. bycianidi, ... gr. xxij;
Glycerini puri, ... ʒ iv;
Aquæ ad., ... ʒ iv.

The medium dose is ten drops. The injections should be made on the outer aspect of the upper part of the arm, or between the spine and lower angle of the shoulder-blade. *(Ibid.)*

Boracic Acid.—Dr. Chiene has found that this substance is a most excellent antiseptic and deodorizer. He has used for eighteen months an ointment, consisting of one part of finely-powdered boracic acid to two parts of the unguentum simplex of the pharmacopœia. He has also used the boracic powder mixed, in the same proportions as in the ointment, with fuller's earth, china-clay or kaolin, and starch. In superficial abrasions and excoriations, in eczematous and prurigous

eruptions, these powders were most efficacious. He thought his ointment preferable to Mr. Lister's, in that it contained more boracic acid. The important requisite was to get the acid very finely powdered. A chemist has recently manufactured boracic pessaries and suppositories, which Dr. Chiene believes would be most useful as deodorizers in fetid discharges from the vagina and rectum. A still better application is presented by an ointment composed like that above described, except that instead of one part of boracic acid it contains half the quantity of salicylic acid, the antiseptic virtues of which have been quite recently discovered by Prof. Kolbe, of Leipsig. Salicylic acid, while possessing very remarkable antiseptic power, is even less irritating than boracic acid. (Edinburgh Medical Journal.)

Mucous Polypus cured by Acetic Acid.—Dr. Méplain, of Moulins, gives the history of a man, thirty years of age, who had been afflicted for a month with mucous polypus of the velum palati. The tumor was growing rapidly, and impeded deglutition and speech, and gave rise to considerable hemorrhage. Applications of chromic and carbolic acids, removals with scissors, etc., afforded no relief, the tumor being constantly reproduced. A drop of acetic acid was injected into the polypus, and it immediately began to shrink; a second injection completed the cure, and five months later there were no symptoms of a return of the disease. (New York Medical Journal.)

Treatment of Iritis.—Mr. C. Hegge contributes to Guy's Hospital Reports a valuable paper on iritis, from which we extract the following:

"As long as the pupil can be kept well dilated there is little fear of any extensive adhesions taking place, or of its area becoming blocked by inflammatory products. Sulphate of atropia is the agent most commonly used to dilate the

pupil, in solutions of varying strength, or in the form of atropia gelatine, which consists of thin sheets of gelatine imbued with sulphate of atropia and marked into squares. Belladonna may also be used for the same purpose, but is less certain in its action than atropia. In every case of iritis the surgeon should place a few drops of a solution of sulphate of atropia, two or four grains to the ounce of water, on the conjunctiva of the lower lid at the time of his visit, and should, if possible, see the patient again in the course of twenty minutes or half an hour. If the iritis be in an incipient form, some dilatation of the pupil will have taken place; but not if the inflammation has lasted for any length of time. In any case a solution of one grain of sulphate of atropia to an ounce of water should be prescribed for the patient to use himself from three to six or eight times a day; or a weaker solution, one eighth or one fourth of a grain to the ounce of water, may be ordered to be used every hour or half-hour, or even oftener, throughout the day. Among the working classes, who are engaged all day, and have not much time to attend to their eyes, it is well to order the atropine to be used in the evening only, three to four or six times in the hour or two before going to bed. In every case the condition of the pupil must be carefully noted at each visit, and more of the strong solution applied whether dilatation has taken place or not. Belladonna is best employed as a lotion, containing from six to ten grains of the extract to an ounce of water, with which the eye should be frequently bathed, and as much as possible allowed to get between the lids. It may be used either hot or cold, whichever may be most grateful to the patient. In cases where the iritis is accompanied by suppuration in the iris or cornea the eye must be kept bound up with lint soaked and constantly kept wet with warm belladonna lotion. In those cases which are accompanied by severe pain this application will be found most soothing. A strong solution of atropine must also be used three or four times a day.

"A peculiar form of erysipelatous inflammation affecting the eyelids (the lower one more especially), side of nose, and cheek, known as atropism, and caused by constant irritation of the tears and atropine solution, is not unfrequently met with when the treatment has been long continued. Some persons appear particularly prone to this form of inflammation, a very few applications being enough to set it up. It is frequently very obstinate, and prevents entirely the use of atropine. It is best prevented by keeping the parts with which the tears and solution come in contact well greased with some simple ointment. Atropine gelatine should be used as a substitute for the solution, one of the small squares, or rather oblongs, into which the sheets are divided being placed on the conjunctiva of the lower lid as often as may appear necessary. Lately a solution of one fourth of a grain of daturine to one ounce of water has been used in the eye-wards at Guy's, and found to act satisfactorily, causing little irritation in cases in which atropine was not tolerated.

"The inflammation must be kept down by antiphlogistic treatment, excepting in cases of iritis depending on debility. Leeches, from two to six, applied to the temple corresponding to the affected eye considerably diminish the intensity of the inflammation, and often act like magic in relieving the most severe pain. They may be applied every third or fourth night if necessary; the artificial leech is also most useful. Blisters to the temples or behind the ears are beneficial, and in some cases a succession of them may be kept up if required. Of drugs mercury is the most useful in checking the formation of inflammatory products. There is no better mode of administration than in the form of the old-fashioned and much-abused mercury and opium. A pill containing two to three grains of pil. hydrar. and half a grain of opium should be given every night and morning, or oftener, as long as may appear necessary. The effect must always be carefully watched, and the pills discontinued as soon as any inconvenience in

biting hard crust or biscuits is experienced. If there be severe pain, opium must be given in larger doses, especially at night.* Hot fomentations of belladonna or poppy capsules, or a mixture of the two, give great relief in some cases of iritis accompanied by pain; in others the application of ice is found most agreeable. The patient's own sensations must always be consulted on these points, and he should be recommended to use either hot or cold applications, whichever affords him the greatest relief. It is only in severe cases of iritis that the rather energetic measures above described are necessary."

INJECTION OF PULMONARY CAVITIES.—In an exhaustive paper on this subject by Prof. Pepper, of Philadelphia, contained in the American Journal of Medical Sciences for October, he sums up the question in the following propositions: 1. That the idea of opening lung-cavities by an incision through the chest-walls is at least as old as Baglivi, probably much older; but that, owing to the very imperfect character of early clinical records of thoracic diseases, it is difficult to show that such an operation was actually performed before the last century (Barry), or more probably the present one (Hastings and Storks). 2. That the idea of conducting continuous treatment of such cavities by local applications made directly through the chest-walls has been seriously entertained only within the past few years. 3. That the possibility of puncturing the lung in a state of health with delicate needles without injury was demonstrated in a few instances by the advocates of acupuncture, and more recently in the lower animals by Koch and others. 4. That the operations of Storks and Mosler have shown that lung-cavities are very tolerant of external interference, and that they may be cut down and opened, canulæ introduced and retained, and various medicinal agents injected

* "Since writing the above I have heard the employment of opium with extract of hyoscyamus (in pills containing half a grain of the former to two grains of the latter, taken repeatedly until almost poisonous effects have been produced) most highly spoken of in cases of painful recurrent iritis."

in solution or spray (Mosler). 5. That the independent observations reported in full in this paper have shown that the continuous treatment of lung-cavities by repeated injections b means of delicate canulæ may be conducted without pain, hemorrhage, traumatic irritation, or interference with internal medication and hygienic measures. 6. That the cases which are best adapted for this local treatment are those where a single, superficial, and circumscribed non-tuberculous cavity exists; but that even when there is implication of the rest of the lung, or incipient disease of the opposite lung, some benefit may be expected. 7. That the mode in which such local treatment does good is chiefly by altering the character of morbid action in the walls of the cavity, diminishing the amount of purulent formation, as well as the degree of hectic irritation and the danger of constitutional infection; that a certain amount of rest for the walls of the cavity is secured by the marked relief afforded to the cough; also that it is indicated, by the progress of the cases above reported, that this treatment may favor the cicatrization and contraction of such cavities. 8. That in the cases in which it has been employed, in which over seventy injections have been given, it has shown itself free from all danger and of a *certain degree of positive clinical value*, since during its use uniform improvement to an exceptional degree has taken place in both the general and local conditions of the patients.

Diphtheria. — Mr. T. Prangley read a paper before the British Medical Association, founded on the observation of fifty-six cases of diphtheria, which came under his care at Aylsham during an epidemic which prevailed in the summer and autumn of 1868. The cases had been of all degrees of severity. He regarded the amount of engorgements of and deposit on the tonsils as a valuable prognostic sign, and said that one of the worst signs was the extension of the disease to the nares. The propagation of diphtheritic membrane to

the larynx was also an ominous symptom. Regarding the treatment, he said that in every case he applied tincture of iodine (forty-eight grains to one drachm) locally to every part of the throat covered with membrane at least once in every twenty-four hours, and also ordered the inhalation of iodine-vapor with steam. The general treatment was supporting and stimulating. Of his fifty-six cases seven died, five of whom were moribund when he first saw them.

Sir John Cormack said it was not safe to found our treatment of diphtheria only upon what we ourselves may have seen and done. A practitioner may have seen in some particular locality, or in some particular epidemics, nothing but recoveries; and if he have applied iodine locally, and given zinc or iron internally, he may be inclined to attribute the successful issue of his cases to the treatment which he pursued. Unless he be as conversant with the experience of others as with his own, he may long slumber under his delusion; but the time may come to him, as it has come to others, when in spite of his cherished remedies, local and general, he will see a large proportion of the attacked perish from croup, or be saved only by tracheotomy performed in good time. The use of local applications to the throat of a diphtheritic patient is fraught with infinite danger to the applier. Many medical practitioners and medical students have received the diphtheritic poison in the spit of their patients, involuntarily ejected on the application being made. Promising young physicians and some elder men, celebrities in medicine, have died of diphtheria so contracted. If we do apply any thing to the throat, we can only do it with safety to ourselves if we wear a mask; but all potent applications to the throat have ceased to be in favor with those who have seen most of diphtheria. They say that iodine, nitrate of silver, and the like generally produce increased exudation; while in other cases, where the exudative tendency is moderate, they seem to do little or no harm. The only local application now

used by the author is the glycerole of borax of the British Pharmacopœia. It promotes the separation of the pellicle, and does not irritate the mucous membrane. The appearance of albumen in the urine is not of itself of evil prognosis. In many cases in which the urine has been intensely albuminous we have complete recovery. Diphtheria is essentially characterized by intermittence in the gravity of the symptoms; a lull, often mistaken for the dawn of convalescence, is not at all unusual. After such a lull, as a prelude to an exacerbation of symptoms, we can usually by the thermometer detect a rise in temperature, and a concurrent appearance or reappearance of albumen in the urine. Touching the differential diagnosis of simple membranous sore-throat from the specific disease diphtheria, the author thought that it could neither be determined by the presence nor by the absence of fever, nor by any other than one test—a test simple and sure. Apply a small blister to the arm or elsewhere. If the case be diphtheria, the said surface will become covered with a diphtheritic pellicle; if it be not diphtheria, no false membrane will appear.

Mr. Prangley, in reply, said that as regards the pulse, temperature, and urine, he could not get any information from them which was valuable in prognosis. He had in some instances tried for a time treating the cases without any local application, but as they became worse he subsequently resorted to this mode of treatment. He could not agree with Dr. Bradbury that two diseases may co-exist in the body. He thought it better to consider the two forms as one and the same disease, and to impress upon the friends the importance of mild cases. (British Medical Journal.)

On the Bloodless Method.—Prof. Esmarch observes that since he first brought the subject before the Third Surgical Congress, in Berlin, he has had the opportunity of trying his method in two hundred additional cases, and that he now

entertains a much higher opinion of its utility than he did then. Not wishing to weary his audience with mere statistical details, he yet feels desirous of pointing out the influence which he believes the method exerts in diminishing the mortality of large operations. Thus of thirteen amputations of the thigh he has only lost one, and the same with respect to eleven amputations of the leg, while four of the upper arm all recovered; so that in twenty-eight of the greater amputations there occurred only two deaths. An amputation of the shoulder succeeded, but one of the hip-joint, which from the first was almost hopeless, failed; and of eight excisions of the large joints (three of the hip, three of the knee, and two of the elbow) only one terminated fatally. These are favorable results that can not readily be surpassed. His clinical wards are contiguous to the medical wards, and both have long been overcrowded, and erysipelas, diphtheria, and pyæmia have been often met with. He is under the conviction that the more favorable results of the present year are due to the adoption of the bloodless method. This presents the following advantages:

1. The small loss of blood which takes place. Every one is aware how convalescence is retarded and endangered when the loss of blood has been large. The production of acute anæmia here is the great danger. The coagulability of the blood augments in many cases with the impoverishment of the red globules, and with this increases the danger of thrombosis and pyæmia.

2. Sponges need not be brought in contact with the unbleeding surface. Although he has always been very careful not to use sponges that have not been thoroughly cleansed and disinfected, yet Dr. Esmarch has still suspected that they have still had something to do with transporting contagious material, and especially the poison of erysipelas.

3. The large arteries and veins are not subjected (as they are when the tourniquet or digital compression is employed)

to violent local pressure. They are equally compressed on every side by the entire mass of the soft parts being inclosed in the ligature.

Disadvantages of the method Prof. Esmarch has not met with himself, and especially he has not seen paralysis as a consequence of the ligature; and he believes that when this has taken place in the hands of others it has arisen from too powerful an application of the caoutchouc tubing. Indeed he has had to prevent his own assistants committing this error. All kinds of caoutchouc are not suitable, and he prefers the brown, non-vulcanized, and tubes or rollers made of the red caoutchouc; and in general no great force is required to completely prevent the afflux of arterial blood. The first turn should especially not be too forcible, as each succeeding one considerably increases its effect. Any one may be easily convinced of this by passing a fine caoutchouc bandage several times around the same part of a finger. He has never met with gangrene of the flaps reported by some surgeons, and thinks that this has been dependent upon other causes.

Additional advantages of the method are referred to; thus, as a consequence of the local ischæmia and compression of the nerves, a local anæsthesia is induced, rendering operations but slightly painful. In the out-patient establishment at Kiel it is almost always resorted to for small amputations, incisions, removal of nails, etc. Generally the anæsthesia does not occur until some minutes after the application; but if Richardson's spray-douche be used it is quickly induced, as the freezing is infinitely more quickly brought about when the arteries no longer bring additional caloric with the blood.

The method allows of a thorough examination being made of diseased parts, especially in the bones and joints. On many occasions Prof. Esmarch has examined these as deliberately as in the dissecting-room before he decided whether he would perform excision or amputation. He has thus frequently been able to assure himself of the various alterations on the living

body, and has submitted portions to the microscope before he would decide on operating. The same assistance is derived in the removal of small foreign bodies—such as needles, glass, splinters, etc.—which have become imbedded in the hands or feet; and every one knows how a constant stream of blood aggravates the difficulties in these cases, leading in some cases to the abandonment of the attempts. Now, if the situation of the body be but known, it is removed with the greatest ease, and the slight wound necessary for this usually heals by the first intention. Of the great facility with which the ends of wounded arteries may now be found Leisrink and Stokes have published remarkable examples.

Another advantage greatly to be prized is the fact that many of the great operations can be performed without any skilled assistance whatever; a fact of importance not only in military surgery, and for surgeons when alone on board ship, but still more so for practitioners in the country and in small towns. Many are the thankful communications on this head which the professor has received from his pupils scattered about in country parts. One of them, not having the apparatus with him, employed a linen binder and his elastic braces during the easy extraction of a splinter of glass which was imbedded in the arm. It is very desirable that officers and soldiers going into battle should have elastic bracts capable of being used in the arrest of hemorrhage on emergency. Prof. Müller, of Würzburg, suggests that in a woman dying of hemorrhage the ligature might be applied to the four extremities so as to force the blood toward the trunk and head, thus warding off collapse and giving time for transfusion, or enabling us to dispense with this.

By means of the ligature, which may be applied at any part of the extremities, lay persons are in the position of being able to control accidental hemorrhage, no knowledge of the places of the arteries being required, as for the application of the tourniquet. As Prof. Langenbeck has remarked,

in most cases an elastic bandage will answer the purpose as well as the caoutchouc tube, while its pressure is gentler and more uniform; but still there are cases in which the tube can not be thus superseded owing to its smaller size. Prof. Esmarch can not agree with those who think that his method is not suitable in operations upon the shoulder and hip-joint, having himself employed it in several of these with complete success. In operations upon the shoulder blood may be prevented passing through the axillary artery by carrying the tube under the axilla, drawing it tight over the shoulder, and keeping it in a state of tension by a strong fist supported by the clavicle; or both ends may be held together by a clamp, like that used for fixing the pedicle in ovariotomy. Bringing the tube across the chest and back to the opposite axilla, as was at first done, is objectionable, on account of the interference with respiration that is produced. In amputations at the upper part of the thigh the tube may be passed firmly once or twice around the limb just under the bend of the thigh, crossing the ends over the inguinal region, and carrying them around the posterior surface of the pelvis, and uniting them over the lower part of the abdomen; or a binder may be firmly rolled up and applied as a pad over the external iliac above Poupart's ligament, and compressed by several turns of a strong caoutchouc bandage. In operations upon the hip-joint itself, however, such a bandage would be in the way, and we must then compress the aorta in the umbilical region. This can be done by means of a pad formed of a linen bandage eight meters long and six centimeters broad. This is wound around the middle of a wooden staff the thickness of a thumb and a foot in length, which enables the pad to be retained in its right position. The pad is applied immediately under the umbilicus, and is compressed powerfully against the spinal column by five or six turns of a caoutchouc bandage six centimeters in breadth. By this means the flow of arterial blood through the aorta can be completely arrested,

provided care has been taken beforehand to empty the intestinal canal by means of purgatives and enemata. In some cases it is preferable to employ a pediculated pad, which allows of its being pressed deeper into the abdomen. Prof. Esmarch has had a slit made in the steel pedicle of his pad *(pelote)*, through which the turns of the caoutchouc binder can be easily passed. Several persons have recommended raising the limb for some minutes prior to the operation before applying the compressor, but this is by no means of the same utility as the methodical application of an elastic bandage. The only cases in which the raising the limb is of advantage are those in which the presence of foul secretions renders it unadvisable to force them by the bandage into the cellular tissue and lymphatic system. It is very desirable, in cases in which there are open wounds, ulcers, or fistulæ of the extremities, that these should not only be covered with varnished paper, etc., but that pure caoutchouc bandages only should be employed, because these are much easier cleaned than those in which silk or cotton enter into the composition. (Medical Times and Gazette.)

Notes and Queries.

DEATH OF DR. ANSTIE.—The profession every where will receive the announcement of the death of this eminent physician with feelings of profound regret. Dr. Anstie, while ranking among the foremost medical men of the chief city of the world, was still a young man, which renders his loss more grievous to the profession. Besides being editor of the Practitioner, he was on the editorial staff of the London Lancet, from which we derive the following particulars of his life and the circumstances of his melancholy death, which occurred at his house in London on the 12th of September.

Francis Edmund Anstie was born at Devizes on the 11th of December, 1833. He was the second son of a manufacturer in easy circumstances. After being educated at a private school in his native town he was articled to his cousin, Mr Thomas Anstie, in 1850, with whom he remained three years. In 1853 he entered King's College, and gained the Gill prize for general proficiency at the end of his first winter session. He was undecided after four years as to his future line of practice, and in 1857 took the post of resident physician—accoucheur's assistant in the hospital. In the autumn of the same year he took his M. B. degree in the University of London, and was for some time occupied in administering chloroform for Sir William Fergusson. He was appointed physician to the Chelsea Dispensary in 1859, by which time he had decided to devote himself to the practice of medicine.

Dr. Anstie became a teacher of medicine in connection with Westminster Hospital in 1860, lecturing first on forensic medicine and subsequently on materia medica; his course,

as the writer in the Lancet remarks, "being devoted rather to the therapeutic action of drugs than to matters of mere detail." In 1863 he married, and thenceforward, continues the same writer, "devoted himself far more closely to the practical business of his calling, displaying a power of study and sustained work that had previously lain in abeyance, and that rapidly brought him into the first rank of his contemporaries." The year following his marriage appeared his work on Stimulants and Narcotics, the result chiefly of his researches and observations at Westminster Hospital. For thirteen years he continued to discharge the duties of assistant physician to the hospital, devoting himself with great assiduity to the out-patient department. About a year ago he succeeded to the post of physician, in which he found full scope for those powers of clinical teaching which had been cultivated to their utmost by his long work among out-patients. In addition to his appointment at the Westminster Hospital he was physician to the Belgrave Hospital for Children, and consulting physician to the Royal South London Ophthalmic Hospital.

For many years Dr. Anstie was a member of the editorial staff of the London Lancet, and in 1868 projected the Practitioner, of which he was long the sole editor. In 1865 he became a Fellow of the College of Physicians, "and was now recognized as a power in that venerable institution, where his voice was raised in support of every proposal which was calculated to increase the dignity or extend the usefulness of the college." His last work, and that on which his reputation will chiefly rest, is his thoroughly scientific treatise on Neuralgia, a second edition of which he was preparing for the press when arrested by the accident which terminated his valuable life. The writer in the Lancet remarks with feeling:

"It is impossible, in dwelling upon the rare qualities which characterized Dr. Anstie, to separate the personal, which endeared

him to his intimate friends, from the intellectual, by which his name became familiar to the profession and the public. He was a physician of the type which is the pride of English physic and the crown of our schools of medicine; or rather it should be said he was a typical physician of this class. His intellectual culture was not inferior to his strictly medical culture, and this was of the highest. The one, in fact, formed as it were the fitting setting for the other. Complete in the technical knowledge of his profession, he brought to its application in actual life that happy combination of scientific and practical acumen, conjoined with a peculiar charm of manner, which make the physician in the truest and best sense of the word. Prompted by a thorough love of medicine, he labored closely and hard at some of its most complicated problems, and he has left results of enduring value both scientific and practical. His scientific work is characterized by keen insight into the problems with which he dealt, and by a rare appreciation of the light in which his researches should be regarded, as contributing on the one hand to existing knowledge of the subjects to which they referred, and on the other to the furtherance of investigation. His practical work was distinguished by the skill with which he sought to educe principles of treatment from pathological and physiological data, and rationalized necessary empiricism. Widely read in the literature of his profession, he brought a richly-stored memory to his editorial and literary duties. He was an eager upholder of the dignity of medicine, and an unsparing critic of whatever militated against the good name of the profession within or without its ranks. A clear and incisive style gave power to a pen which, if it was keen, was never unkind, and which has performed an active and influential part in all the great questions which have agitated medicine in its social and political bearings for some years past.

"The substantial fruits of Dr. Anstie's labors were about to be gathered, when, in the earnest pursuit of a duty, he accidently received the infection which killed him. Medicine, although rich in sterling workers, can ill afford to lose such a man, and the manner of his death aggravates the painful sense of his loss. It was too costly a life to have been sacrificed prematurely in so pitiful a way."

The circumstances of his death will form part of the history of the profession. The schools of the Patriotic Fund at Wads-

worth had been visited by a somewhat strange succession of illnesses, and at last some of the children were attacked by a rapidly fatal form of peritonitis. Dr. Anstie was called in to the assistance of the medical officer, and he made a careful examination both of the premises and of the patients. He was at the time suffering from over-work and want of rest, and was perhaps hardly in a state to undertake the oftentimes dangerous duty of a medico-sanitary inspection; but after accomplishing it he made, on Sunday, the 6th, a post-mortem examination of one of the children who had died from peritonitis. While thus engaged the middle finger of his right hand was accidentally punctured with a needle. He sucked and washed the wound immediately, and on Tuesday mentioned the occurrence to some of his friends, but expressed a hope that no harm would result from it. On Wednesday he felt ill, and complained of pain in his right arm-pit. During the afternoon he was so chilly that he sat before a fire wearing an overcoat. Dining with a friend in the evening, he spoke of having poisoned his hand, and said that he had much pain in the arm-pit, that he feared he would have an abscess there. On Thursday he was confined to his bed, and Dr. Brudenell Carter found him with a dry tongue, a dry, hot skin, and complaining of distressing headache, and of much pain over the right pectoral region. After a restless night the patient was worse on Friday, and the assistance of Dr. Geo. Johnson was obtained. At three P. M. on Friday he was delirious, his tongue dry, and his temperature 105°. There was an erysipelatous blush about the size of the palm of the hand over the right pectoral muscle, and there was excessive tenderness on pressure in the right axilla and over the front of the chest, on the right side. His condition at half-past nine the same evening remained unchanged. At half-past nine Saturday morning the breathing was very rapid; there was a distinct friction sound over the middle and lower lobe of the right lung, and dullness on percussion over the same space; the

erysipelatous redness and tenderness remained the same; the urine was highly albuminous, and contained numerous epithelial casts. About the middle of the day symptoms of a blood-clot at the right side of the heart came on; the features were livid; the breathing rapid and shallow; consciousness was rapidly lost, and death occurred at half-past two P. M.

PECCAVI.—The writer of the review, in the last number of the American Practitioner, of Dr. Barker's admirable book on *The Puerperal Diseases* did not see the *proof* of his article, or else some errors that he committed would have been corrected. On page 2 of Dr. Barker's book there occurs a sentence which is quoted in the review, and which *seems* to teach, as I have said, two errors; but on pages 308 and 309 Dr. Barker describes at length, from Robin, the physiological modifications of the uterine mucous membrane after parturition. Another error was stating that Dr. Barker made no reference to D'Espine's monograph on *Septicæmia*. No such reference does occur in the part of the volume of which I was then writing, but will be found some two or three times in subsequent portions of it. T. P.

DIGITALIS IN MENORRHAGIA.—An able physician and valued friend, Dr. G. W. H. Kemper, of Muncie, Ind., has criticized my failure to refer in some recently-published contributions to the value of digitalis in menorrhagia, and a part of his note is given below. T. P.

"FEBRUARY 1, 1870.—Dr. John L. Sullivan read a paper before the Gynecological Society of Boston, afterward published in their Journal for June of same year, entitled "Digitalis in Uterine Hemorrhage." Dr. S. refers to the laudatory reports of this remedy in uterine hemorrhages first made by Dr. W. H. Dickinson, of St. George's Hospital, London, in the Medical Times and Gazette for December, 1855, and gives a number of cases of metrorrhagia occurring in his own practice which speedily yielded to digitalis. He recommended small doses, frequently repeated—as tea-spoonful

doses of the infusion every hour. For four years past I have habitually prescribed digitalis in uncomplicated cases of metrorrhagia similar to the plan above, and I rely very nearly as much upon its curative powers in this disease as I do upon the use of quinine in malarial diseases."

THE BROMIDE OF CALCIUM.—Drs. Eulenberg and Juttman (Reichert and DuBois's Archive) have examined the physiological action of the bromide of calcium and other lime salts. Bromide of calcium has a similar but much weaker effect than the potash salt. While the latter, if administered hypodermically, in doses of from 1.5 to 2.25 grains, produced paralysis of the sensitive and motor nerves in frogs, and retardation and entire cessation of the heart's action, 3.5 to 7.5 grains of bromide of calcium are required to produce the same effects. After the use of the former the heart ceases to act in the systole, while if the latter be applied it stops in the diastole. In order to produce death in a squirrel 30 to 60 grains of the potash salt and 120 grains of the lime salt were needed. The bromide of calcium has been used successfully in the treatment of epilepsy, neuralgia, angina pectoris, and hysteria in from 45- to 75-grain doses.